

Virginia Amusement Device Regulations (VADR)

Base Document for 2012 Code (Starts with Virginia Code Commission database and adds amendments to use the newest ASTM standards, plus has editorial corrections)

Part I - General Provisions

13VAC5-31-10. Purpose.

A. The purpose of this chapter is to establish standards for the regulation, design, construction, maintenance, operation, and inspection of amusement devices.

B. The provisions of the USBC, including but not limited to all administrative procedures shall apply in the administration and enforcement of this chapter and to amusement devices to the extent such provisions are not superseded by the provisions of this chapter.

13VAC5-31-20. Definitions.

A. The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise:

“Amusement device” means (i) a device or structure open to the public by which persons are conveyed or moved in an unusual manner for diversion, but excluding snow tubing parks and rides, ski terrain parks, ski slopes, and ski trails, and (ii) passenger tramways.

“Bungee cord” means the elastic rope to which the jumper is attached which lengthens and shortens to produce a bouncing action.

“Carabineer” means a shaped metal device with a gate used to connect sections of a bungee cord, jump rigging, equipment, or safety gear.

“DHCD” means the Virginia Department of Housing and Community Development.

“Gravity ride” means a ride that is installed on an inclined surface, which depends on gravity for its operation to convey a passenger from the top of the incline to the bottom, and which conveys a passenger in or on a carrier tube, bag, bathing suit, or clothes.

“Ground operator” means a person who assists the jump master to prepare a jumper for jumping.

“Harness” means an assembly to be worn by a bungee jumper to be attached to a bungee cord. It is designed to prevent the wearer from becoming detached from the bungee system.

“Jump master” means a person who has responsibility for the bungee jumper and who takes the jumper through the final stages to the actual jump.

“Jump zone” means the space bounded by the maximum designed movements of the bungee jumper.

“Jumper” means the person who departs from a height attached to a bungee system.

“Kiddie ride” means an amusement device where the passenger or patron height is limited to 54 inches or less, the design capacity of passengers or patrons is 12 or less, and the assembly time for the device is two hours or less.

“Landing area” means the surface area of ground or water directly under the jump zone, the area where the lowering device moves the bungee jumper to be landed away from the jump space and the area covered by the movement of the lowering device.

“Local building department” means the agency or agencies of the governing body of any city, county or town in this Commonwealth charged with the enforcement of the USBC.

“Operating manual” means the document that contains the procedures and forms for the operation of bungee jumping equipment and activity at a site.

“Passenger tramway” means a device used to transport passengers uphill, and suspended in the air by the use of steel cables, chains or belts, or ropes, and usually supported by trestles or towers with one or more spans.

“Platform” means the equipment attached to the structure from which the bungee jumper departs.

“Private inspector” means a person performing inspections who is independent of the company, individual or organization owning, operating or having any vested interest in an amusement device being inspected.

“Ultimate tensile strength” means the greatest amount of load applied to a bungee cord prior to failure.

“USBC” means the Virginia Uniform Statewide Building Code (13VAC5-63).

B. Words and terms used in this chapter which are defined in the USBC shall have the meaning ascribed to them in that regulation unless the context clearly indicates otherwise.

C. Words and terms used in this chapter which are defined in the standards incorporated by reference in this chapter shall have the meaning ascribed to them in those standards unless the context clearly indicates otherwise.

13VAC5-31-30. Exemptions.

The following equipment or devices shall not be considered amusement devices subject to this chapter:

1. Nonmechanized playground or recreational equipment such as swing sets, sliding boards, climbing bars, jungle gyms, skateboard ramps and similar equipment where no admission fee is charged for its use or for admittance to areas where the equipment is located;
2. Coin-operated rides designed to accommodate three or less passengers; and
3. Water slides or similar equipment used in community association, community club or community organization swimming pools.

13VAC5-31-40. Incorporated standards.

A. The following standards are hereby incorporated by reference for use as part of this chapter:

1. American National Standards Institute (ANSI) Standard No. ~~B77.1-2006~~ B77.1-2011 for the regulation of passenger tramways; and
2. American Society for Testing and Materials (ASTM) Standard Nos. ~~F698-94 (Reapproved 2000)~~, F747-06, ~~F770-06a~~ F770-11, F846-92 (Reapproved 2003 2009), F853-05, ~~F893-05a~~ F893-10, F1159-03a, F1193-06, ~~F1305-94 (Reapproved 2002)~~, ~~F1950-99~~, F1957-99 (Reapproved 2004 2011), ~~F2007-06~~ F2007-11, ~~F2137-09~~ F2137-11, ~~F2291-09b~~ F2291-11, ~~F2374-07a~~ F2374-10, ~~F2375-09~~, ~~F2376-06~~ F2376-08 and ~~F2460-06~~ F2460-11 for the regulation of amusement devices.

The standards referenced above may be procured from:

ANSI
25 W 43rd Street
New York, NY 10036

ASTM
100 Barr Harbor Dr.
West Conshohocken, PA 19428-2959

B. The provisions of this chapter govern where they are in conflict with any provisions of the standards incorporated by reference in this chapter.

C. The following requirements supplement the provisions of the ASTM standards incorporated by reference in this chapter:

1. The operator of an amusement device shall be at least 16 years of age, except when the person is under the supervision of a parent or guardian and engaged in activities determined not to be hazardous by the Commissioner of the Virginia Department of Labor and Industry;
2. The amusement device shall be attended by an operator at all times during operation except that (i) one operator is permitted to operate two or more amusement devices provided they are within the sight of the operator and operated by a common control panel or station and (ii) one operator is permitted to operate two kiddie rides with separate controls provided the distance between controls is no more than 35 feet and the controls are equipped with a positive pressure switch; and
3. The operator of an amusement device shall not be (i) under the influence of any drugs which may affect the operator's judgment or ability to assure the safety of the public or (ii) under the influence of alcohol.

D. Where an amusement device was manufactured under previous editions of the standards incorporated by reference in this chapter, the previous editions shall apply to the extent that they are different from the current standards.

13VAC5-31-50. Certification of amusement device inspectors.

A. Any person, including local building department personnel, inspecting an amusement device relative to a certificate of inspection shall possess certification as an amusement device inspector in accordance with the Virginia Certification Standards (13VAC5-21).

B. Local building department personnel enforcing this chapter and private inspectors shall attend periodic maintenance training as designated by DHCD. In addition to the periodic maintenance training required above, local building department personnel and private inspectors shall attend 16 hours of continuing education every two years as approved by DHCD. If local building department personnel or private inspectors possess more than one BHCD certificate, the 16 hours shall satisfy the continuing education requirement for all BHCD certificates.

13VAC5-31-60. Appeals.

Appeals from the local building department concerning the application of this chapter shall be made to the local board of building code appeals established by the USBC. Application for appeal shall be filed with the local building department within 14 calendar days after receipt of the decision of the local building department. The board of appeals shall hear the appeal within seven calendar days after the application for appeal is filed. After final determination by the board, any person who was a party to the appeal may appeal to the Technical Review Board within 14 calendar days of receipt of the decision to be appealed. Such appeal shall be in accordance with the procedures established in the USBC, under the authority granted by § 36-98.3 of the Code of Virginia where the provisions of Chapter 6 of Title 36 of the Code of Virginia and the USBC apply to amusement devices.

NOTE: Because of the short time frames normally associated with amusement device operations, DHCD staff will be available to assist in finding a timely resolution to disagreements between owners or operators and the local building department upon request by either party.

Part II - Enforcement, Permits and Certificates of Inspection

13VAC5-31-75. Local building department.

A. In accordance with §§ 36-98.3 and 36-105 of the Code of Virginia, the local building department shall be responsible for the enforcement of this chapter and may charge fees for such enforcement activity. The total amount charged for any one permit to operate an amusement device or devices or the renewal of such permit shall not exceed the following, except that when a private inspector is used, the fees shall be reduced by 50%:

1. \$25 for each kiddie ride covered by the permit;
2. \$35 for each circular ride or flat-ride less than 20 feet in height covered by the permit;
3. \$55 for each spectacular ride covered by the permit that cannot be inspected as a circular ride or flat-ride in subdivision 2 of this subsection due to complexity or height; and
4. \$150 for each coaster covered by the permit that exceeds 30 feet in height.

B. Notwithstanding the provisions of subsection A of this section, when an amusement device is constructed in whole or in part at a site for permanent operation at that site and is not intended to be disassembled and moved to another site, then the local building department may utilize permit and inspection fees established pursuant to the USBC to defray the cost of enforcement. This authorization does not apply to an amusement device that is only being reassembled, undergoing a major modification at a site or being moved to a site for operation.

C. A permit application shall be made to the local building department at least five days before the date in which the applicant intends to operate an amusement device. The application shall include the name of the owner, operator or other person assuming responsibility for the device or devices, a general description of the device or devices including any serial or identification numbers available, the location of the property on which the device or devices will be operated and the length of time of operation. The permit application shall indicate whether a private inspector will be utilized. If a private inspector is not utilized, the applicant shall give reasonable notice when an inspection is sought and may stipulate the day such inspection is requested provided it is during the normal operating hours of the local building department. In addition to the information required on the permit application, the applicant shall provide proof of liability insurance of an amount not less than \$1,000,000 per occurrence or proof of equivalent financial responsibility. The local building department shall be notified of any change in the liability insurance or financial responsibility during the period covered by the permit.

D. Notwithstanding the provisions of subsection C of this section, a permit application is not required for a kiddie ride that has an unexpired certificate of inspection issued by any local building department in this Commonwealth. In such cases, the local building department shall be notified prior to the operation of the kiddie ride and the information required on a permit application as listed in subsection C of this section shall be provided to the local building department.

E. Local building department personnel shall examine the permit application within five days and issue the permit if all requirements are met. A certificate of inspection for each amusement device shall be issued when the device has been found to comply with this chapter by a private inspector or by an inspector from the local building department. It shall be the responsibility of the local building department to verify that the private inspector possesses a valid certificate of competence as an amusement device inspector from the Virginia Board of Housing and Community Development. In addition, local building department personnel shall be responsible for assuring that the certificate of inspection is posted or affixed on or in the vicinity of the device in a location visible to the public. Permits shall indicate the length of time the device or devices will be operated at the site, clearly identify the device or devices to which it applies and the date of expiration of the permit. Permits shall not be valid for longer than one year.

F. In addition to obtaining a certificate of inspection in conjunction with a permit application for amusement devices permanently fixed to a site, a new certificate of inspection shall also be obtained prior to the operation of an amusement device following a major modification, prior to each seasonal operation of a device, at least once during the operating season and prior to resuming the operation of a device following an order from a local building department to cease operation. This requirement shall not apply to kiddie rides meeting the conditions outlined in subsection D of this section.

G. For amusement devices manufactured prior to 1978, the owner or operator shall have the information required by §§ 2.1 through 2.6 of ASTM F698 available at the time of inspection. In addition, the operator of any amusement device shall be responsible for obtaining all manufacturer's notifications, service bulletins and safety alerts issued pursuant to ASTM F853 and the operator shall comply with all recommendations and requirements set out in those documents. A copy of all such documents shall be made available during an inspection.

H. In the enforcement of this chapter, local building department personnel shall have authority to conduct inspections at any time an amusement device would normally be open for operation or at any other time if permission is granted by the owner or operator, to issue an order to temporarily cease

operation of an amusement device upon the determination that the device may be unsafe or may otherwise endanger the public and to accept and approve or deny requests for modifications of the rules of this chapter in accordance with the modification provisions of the USBC.

I. In accordance with subdivision 7 of § 36-137 of the Code of Virginia, the local building department shall collect a 2.0% levy of fees charged for permits under this chapter and transmit it quarterly to DHCD to support training programs of the Virginia Building Code Academy. Localities that maintain individual or regional training academies accredited by DHCD shall retain such levy.

13VAC5-31-85. Accidents involving serious injury or death.

A. If an accident involving the serious injury or death of a patron occurs, the operation of an amusement device shall cease and the local building department and DHCD shall be notified as soon as practicable, but in no case later than during the next working day. The operation of the device shall not resume until inspected by a private inspector or an inspector from the local building department, except where the owner or operator determines the cause was not related to malfunction or improper operation of the amusement device.

B. The owner or operator shall conduct an investigation of the accident including, at a minimum, an examination of the accident scene and interviews of any witnesses or persons involved in the accident. An accident investigation report shall be compiled which, at a minimum, shall contain a summary of the investigation and a description of the device involved, including its serial number and date of manufacture, if available. The report shall be submitted to the local building department within 24 hours of the accident except that if the local building department is closed during that period, then the report shall be submitted with four hours of the reopening of the department.

C. Local building department personnel are authorized to investigate the accident and to issue an order to cease operation when warranted and to specify the conditions under which the device may resume operation. The amusement device shall be inspected prior to resuming operation either by an inspector from the local building department or by a private inspector and found to comply with this chapter.

Part III - Gravity Rides

13VAC5-31-180. General requirements.

A. The provisions of this part are specific to gravity rides and are in addition to other applicable provisions of this chapter.

B. A ride using carriers shall be designed and constructed to retain the passengers in or on a carrier during the operation of the ride and retain the carrier on or within the track, slide, or chute system during the operation of the ride.

C. A ride that conveys passengers not in or on a carrier shall be designed and constructed to retain the passengers within the chute or slide during the ride.

D. At each loading or unloading area, a hard surface which is other than earth and which is reasonably level shall be provided. The surface shall be large enough to accommodate the intended quantity of passengers.

E. Where loading or unloading platforms are elevated more than 30 inches from the adjacent areas, guard rails conforming to the USBC shall be provided.

F. Passengers shall not have to step up or down more than 12 inches from the loading or unloading surface to enter or exit the ride.

G. The frequency of departure of carriers or riders from the loading areas shall be controlled by a ride operator. The minimum distance between departures shall be determined by the designer of the specific ride.

H. When a passenger has control of the speed or course of the carrier, the passenger shall have a clear sight distance along the course of the ride long enough to allow the passenger to avoid a collision with another person or carrier.

I. The unloading area of the ride shall be designed and constructed to bring riders and carriers to a safe stop without any action by the rider.

J. There shall be attendants at the loading and unloading area when the ride is in use. However, where the physical structure of the ride is such that it is not capable of accommodating an attendant at both the loading and unloading area and the entire ride is visible and under the supervision of a single attendant, attendants at both the loading and unloading areas shall not be required.

K. If the entire course of the ride is not visible to the operator, additional persons with communications equipment shall be provided or approved visual surveillance equipment shall be installed along the course of the ride which is not visible to the operator.

L. Any moving or hot parts that may be injurious to the ride operator or the public shall be effectively guarded to prevent contact.

M. Fencing or adequate clearance shall be provided that will prevent the riders from contact with persons or nearby objects.

Part IV - Concession Go-Karts

13VAC5-31-190. General requirements.

In addition to other applicable requirements of this chapter, concession go-karts shall be operated, maintained and inspected in accordance with ASTM F2007.

Part V - Inflatable Amusement Devices

13VAC5-31-200. General requirements.

In addition to other applicable requirements of this chapter, inflatable amusement devices shall be operated, maintained and inspected in accordance with ASTM F2374.

Notwithstanding any requirements of this chapter to the contrary, a permit to operate an inflatable amusement device that is less than 150 square feet and in which the height of the patron containment area is less than 10 feet need not be obtained if the device has an unexpired certificate of inspection

issued by a local building department in this Commonwealth, regardless of whether the device has been disassembled or moved to a new site.

Part VI - Artificial Climbing Walls

13VAC5-31-210. General requirements.

In addition to other applicable requirements of this chapter, artificial climbing walls shall be operated, maintained and inspected in accordance with ASTM F1159.

Notwithstanding any requirements of this chapter to the contrary, an artificial climbing wall may be moved, setup and operated without obtaining a permit provided the wall has a valid certificate of inspection issued by a local building department within the prior 90 days and the expiration date of the wire ropes used with the device does not expire within that 90-day period.

Part VII - Bumper Boats

13VAC5-31-215. General requirements.

In addition to other applicable requirements of this chapter, bumper boats shall be operated, maintained and inspected in accordance with ASTM F2460.

Part VIII - Bungee Jumping

13VAC5-31-220. General requirements.

A. The provisions of this part are specific to bungee jumping and are in addition to other applicable provisions of this chapter.

B. Bungee jumping operations that are open to the public shall be permitted from structures designed for use as part of the bungee jumping operation. Bungee jumping from other types of structures, cranes or derricks is not permitted for public participation.

C. Bungee jumping activities that involve double jumping, sandbagging, catapulting or stunt jumping shall not be permitted to be open for public participation.

13VAC5-31-230. Bungee cords.

A. Bungee cords shall be tested by an approved testing agency or by an engineer licensed in Virginia. The following criteria shall be met:

1. Each lot of bungee cords shall have a minimum of 10%, but not less than one of the cords tested to determine the lowest ultimate tensile strength of the cords tested. A load versus elongation curve based on the test result shall be provided with each lot of bungee cords; and
2. The manufacturer shall specify the maximum number of jumps for which each cord or cord type is designed and the criteria for use of the cord.

B. Bungee cords shall be retired when the cords (i) exhibit deterioration or damage; (ii) do not react according to specifications; or (iii) have reached the maximum usage expressed in number of jumps as specified by the manufacturer. Bungee cords retired from use shall be destroyed immediately by cutting the cord into five-foot lengths.

13VAC5-31-240. Jump hardware.

Jump harnesses shall be either full body-designed, which includes a waist harness worn in conjunction with a chest harness, or ankle-designed with a link to a waist harness. All jump harnesses, carabineers, cables and other hardware shall be designed and manufactured for the purpose or designed or analyzed by an engineer licensed in Virginia and shall be used and maintained in accordance with the manufacturer's or engineer's instructions.

13VAC5-31-250. Structure requirements.

Structures constructed on site for bungee jumping activities shall be designed by an engineer licensed in Virginia. Structures manufactured for bungee jumping activities shall be analyzed by an engineer licensed in Virginia and assembled and supported in accordance with the manufacturer's instructions.

13VAC5-31-260. Operational and site requirements.

A. Operators shall follow the criteria provided by the manufacturer for the use of bungee cords. A record of the number of jumps with each cord shall be maintained. All cords shall be inspected daily for wear, slippage, or other abnormalities unless the manufacturer specifies more frequent inspections.

B. The jump master or site manager shall be responsible for determining the appropriate use of all bungee cords in relation to the weight of the jumper and height of the platform. Bungee cords shall be attached to the structure at all times when in the connection area.

C. All harnesses shall be inspected prior to harnessing a jumper and shall be removed from service when they exhibit signs of excessive wear or damage. All carabineers shall be inspected daily and shall be removed from service when they exhibit signs of excessive wear or damage or fail to function as designed. The anchors shall be inspected daily and shall be replaced if showing signs of excessive wear.

D. A secondary retrieval system shall be provided in all operations. A locking mechanism on the line shall be used to stop and hold the jumper in place after being pulled back to the jump platform in a retrieval system. A dead man's switch or locking mechanism that will stop the lowering action shall be used in a friction lowering system.

E. The jump zone, preparation area and landing/recovery area shall be identified and maintained during bungee jumping activities. The landing/recovery area shall be accessible to emergency vehicles. Communication shall be maintained between all personnel involved with the jump.

F. An air bag, a minimum of 10 feet by 10 feet, shall be used. The air bag shall be rated for the maximum free fall height possible from the platform during operation. The air bag shall be located immediately below the jump space. The landing area shall be free of spectators and debris at all times and shall be free of any equipment or personnel when a jumper is being prepared on the jump platform and until the bungee cord is at its static extended state. A place to sit and recover shall be provided adjacent to, but outside, the landing area where the jumper shall be allowed to recover.

G. Where the jump space or landing area, or both, is over sea, lake, river, or harbor waters, the following shall apply:

1. The landing water area shall be at least nine feet deep and a minimum of 10 feet by 10 feet or have a minimum of 15 feet in diameter if circular;
2. The jump space and landing area shall be free of other vessels, floating and submerged objects and buoys. A sign of approved size that reads "Bungee Jumping! Keep Clear" shall be fixed to buoys on four sides of the landing area;
3. The landing vessel shall be readily available for the duration of the landing procedures;
4. The landing vessel shall have a landing pad size of at least five feet by five feet within and lower than the sides of the vessel;
5. A landing vessel shall be available that can be maneuvered in the range of water conditions expected and will enable staff to pick up a jumper; and
6. One person may operate the landing vessel where the vessel is positioned without the use of power. A separate person shall operate the vessel where power is required to maneuver into or hold the landing position.

H. Where the landing area is part of a swimming pool or the landing area is specifically constructed for bungee jumping, the following shall apply:

1. Rescue equipment shall be available, such as a life ring or safety pole;
2. The jump space and landing area shall be fenced to exclude the public; and
3. Only the operators of the bungee jump and jumper shall be within the jump zone and landing areas.

I. Storage shall be provided to protect equipment from physical, chemical and ultra-violet radiation damage. The storage shall be provided for any current, replacement and emergency equipment and organized for ready access and shall be secure against unauthorized entry.

13VAC5-31-270. Management and personnel responsibilities.

A. All bungee jumping activities shall have a minimum of one site manager, one jump master and one ground operator to be present at all times during operation of the bungee jump.

B. The site manager is responsible for the following:

1. Controlling the entire operation;
2. Site equipment and procedures;
3. Determining whether it is safe to jump;

4. Selection of, and any training of personnel;
5. Emergency procedures; and
6. Maintaining records.

C. A jump master shall be located at each jump platform and shall have thorough knowledge of, and is responsible for, the following:

1. Overseeing the processing of jumpers, selection of the bungee cord, adjustment of the rigging, final check of jumper's preparation, and countdown for and observation of the jump;
2. Verifying that the cord is attached to the structure at all times when the jumper is in the jump area;
3. Rescue and emergency procedures; and
4. Ensuring that the number of jumps undertaken in a given period of time will allow all personnel to safely carry out their responsibilities.

D. The ground operator shall have knowledge of all equipment used and of jump procedures and shall have the following responsibilities:

1. Ensuring that the jumper is qualified to jump;
2. Assisting the jump master to prepare the jumper and attach the jumper to the harness and rigging;
3. Assisting the jumper to the recovery area; and
4. Maintaining a clear view of the landing area.

E. Each site shall have an operating manual that shall include the following:

1. Site plan, job descriptions (including procedures), inspections and maintenance requirements of equipment including rigging, hardware, bungee cords, harnesses, and lifelines; and
2. An emergency rescue plan.

F. The daily operating procedures shall be conducted in accordance with ASTM F770.

G. The qualification and preparation of jumpers shall include obtaining any pertinent medical information, jumper weight and a briefing of jumping procedures and safety instructions.

Part IX - Accessibility Requirements for Amusement Devices

13VAC5-31-280. Scope.

This part shall apply to newly designed and constructed amusement devices for permanent installation and does not apply to amusement devices regularly assembled or disassembled. This part also does not apply to mobile, portable, or temporary amusement devices set up for short periods of time such as at traveling carnivals, state and county fairs, and festivals. For the purposes of this part, newly designed and constructed amusement devices are those that are new upon first use by patrons and the first permanent installation of the ride and would not include a ride that was moved within a park or to another park after several seasons of use.

13VAC5-31-290. Requirements.

Amusement devices subject to this part shall comply with applicable requirements of 36 CFR Part 1191 – Americans With Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities ~~and~~ ; Architectural Barriers Act (ABA) Accessibility Guidelines, 69 FR 44151-44455 (July 23, 2004).